



Certificate of Conformity

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Product designation

Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment
(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Ampac Pty Limited
7 Ledger Road, BALCATTA, WA, AUSTRALIA, 6021

Registrant

Ampac Pty Limited
7 Ledger Road, BALCATTA, WA, AUSTRALIA, 6021

Producer

Ampac Pty Limited
7 Ledger Road, BALCATTA, WA, AUSTRALIA, 6021

Conformance criteria and evaluation

The Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4428.16:2020, 'Fire detection, warning, control and intercom systems - Control and indicating equipment Part 16: Emergency warning control and indicating equipment'.
2. Australian Standard AS 4428.4:2016, 'Fire detection, warning, control and intercom systems - Control and indicating equipment Part 4: Emergency intercom control and indicating equipment'.
3. Australian Standard AS 7240.4:2018, 'Fire detection and alarm systems - Part 4: Power supply equipment (ISO 7240-4:2017, MOD)'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. All parts of the EWCIE and EICIE are mounted in a single enclosure or adjacent enclosures.
- ii. The EWCIE/EICIE enclosure is fitted with the labels as described in this report to meet the Marking requirements of Section 17,

Issued by

Kai Loh
Executive Officer – ActivFire Scheme



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This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Schedule to Certificate of Conformity

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- iii. The EWCIE/EICIE is installed and maintained as recommended by the manufacturer.
- iv. The EWCIE/EICIE is used with a power supply that conforms with AS 7240.4.
- v. The ASS63HPA, 150 W high power amplifier module was only evaluated and verified as conforming to AS 4428.16:2020

Producer's description

The EvacUElite is Emergency Warning Control and Indicating Equipment (EWCIE) with a integrated Emergency Intercom System (EICIE)

The system is designed to receive input signals from a fire detection system then broadcast and facilitate the orderly evacuation of a building in the event of a fire or emergency situation.

The EvacUElite supports a high level interface to an Ampac FireFinderPlus in a combination or individual cabinets. Low level interface is available for third party fire detection systems via hardwired inputs.

Each cabinet size supports a number of universal rack frame assemblies, touch screen graphical user interfaces, power supplies and module cards.

The cabinet is available in two cabinet sizes: 13U and 24U.

The 24U cabinet can accommodate 5 universal racks and the 13U cabinet can accommodate 2 universal racks.

The primary (GUI) graphical touchscreen user interface incorporates the menu system, common and individual controls and indicators for emergency zones.

Secondary graphical user interfaces support additional individual controls and indicators for emergency zones as required.

The 13U cabinet supports 3 GUIs and the 24U cabinet supports 7 GUIs.

Technical specification

The following details are a representative extract of the technical specification for the Ampac, EvacU Elite, 13U and 24U cabinet, Emergency Warning Control and Indicating Equipment and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Schedule of components and/or assemblies

The following is a schedule of validated components and/or assemblies of the certified/listed equipment.

| Variant | | Description | | Mandatory / optional | Hardware version / issue | Software version | |
|--------------|-------------|---------------------|---|------------------------------|--------------------------|------------------|----------|
| Type | Ident | | | | | | |
| Board | BRD63LPA1-A | | Dual 25 W amplifier | | Optional | 5 | 1.0.35.0 |
| | BRD63LPA1-B | | Single 50 W amplifier | | Optional | 5 | 1.0.35.0 |
| | ASS63HPA * | BRD63HDC1-A | 150 W high power amplifier* | HPA DC-DC converter | Optional | 3 | 1.0.9.0 |
| | | BRD63HPA1-A | | High powered amplifier board | | | |
| | BRD63ABB1-A | | Amplifier backplane | | Mandatory | 1 | N/A |
| | BRD63PDB1-A | | Power distribution | | Mandatory | 1 | N/A |
| | BRD63CPU1-A | | Distribution CPU | | Mandatory | 7 | 1.4.4.25 |
| | BRD63GUI1-A | | Graphical user interface card - primary | | Mandatory | 4 | 1.2.2.6 |
| | BRD63NIC1-A | | Network interface card | | Optional | 5 | 1.0.6.1 |
| | BRD63GUI-B | | Graphical user interface card - secondary | | Optional | 4 | 1.0.8.14 |
| | BRD63MIC1-A | | Multi-Purpose input card | | Optional | 4 | 1.1.0.5 |
| | BRD63MOC1-A | | Multi-Purpose output card | | Optional | 4 | 1.1.0.4 |
| | BRD63ILC1-A | | Quad radial line card | | Optional | 5 | 1.0.15.0 |
| BRD63LILC1-A | | Dual loop line card | | Optional | 4 | 1.0.9.0 | |
| PSU | BRD63PCC1-A | | Power control card - primary | | Mandatory | 10 | 1.1.1.3 |
| | RCB-1600-24 | | Power supply module - 27V 1600 W | | Mandatory | N/A | N/A |
| | BRD63PCC1-B | | Power control card - secondary | | Optional | 10 | 1.1.1.3 |
| WIP | ASS63WIPM | | Primary WIP Handset | | Optional | 1 | N/A |

Note: "*" indicates that the module was only evaluated and verified to conform to AS 4428.16:2020

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Schedule of optional functions with requirements

The following schedule of AS 4428.16:2020 optional (or optional required) functions with requirements have been validated for the appropriate EWCIE grade as nominated.

| Option | Grade 1 |
|---|--------------|
| 1. Indications: | |
| a. Alarm signals (CI 7.2) | Provided |
| b. Alert signal (CI 7.3) | Provided |
| c. Indication of the emergency warning condition (CL 7.5) | Provided |
| d. Audible signal of alarm signal reception (CI 7.6) | Provided |
| 2. Controls: | |
| a. Delay before emergency warning condition (CI 7.7) | Provided |
| b. Phased evacuation for multi-zoned systems (CI 7.8) | Provided |
| c. Silencing the emergency warning condition from the emergency detection system (CI 7.9.1) | Not provided |
| d. Silencing the emergency warning condition with a manual control (CI 7.9.2) | Provided |
| e. Reset of the emergency warning condition from the emergency detection system (CI 7.10.1) | Not Provided |
| f. Reset of the emergency warning condition with a manual control (CI 7.10.2) | Provided |
| 3. Outputs: | |
| a. Output to fire alarm devices (CI 7.11) | Provided |
| b. Emergency warning condition output signal (CI 7.12) | Provided |
| 4. Disabled condition (CI 9) | Provided |
| 5. Test condition and indication (CI 10) | Provided |
| a. Automatic/manual mode control (CI 11.1) | Provided |
| b. Manual control to networked EWCIE (CI 11.2) | Provided |
| c. Individual emergency zone controls (CI 12.1) | Provided |
| d. All emergency zone control (CI 12.2) | Provided |
| 6. Interface to external device(s) (CI 13) | Not provided |
| 7. Emergency microphone (CI 14) | Provided |
| a. Ready-to-talk indicator | Provided |
| 8. Redundant power amplifiers (CI 15.15) | Not Provided |
| a. Dry heat, steady state test (operational) (CI 18.9) | 50 °C |

The following schedule of AS 4428.4:2016 optional (or optional required) functions with requirements have been validated.

| Option | |
|---|--------------|
| 1. Fault warning condition: | |
| a. External silencing of the EICIE fault condition (CI 8.8) | Provided |
| 2. Zone cleared condition (CI 9) | Provided |
| 3. Controls: | |
| a. Manual control for networked EICIE (CI 10) | Provided |
| b. Manual controls of EICIE (CI 11) | Provided |
| c. WIP group call control (CI 11.2) | Provided |
| d. Interface to external control device(s) (CI 12) | Not provided |
| 4. Integrity of transmission paths: | |
| a. Paths to remote power supplies (CI 13.5.4) | Provided |
| 5. Operational | |
| a. Dry heat, steady state test (operational) (CI 16.6) | 50 °C |

The following schedule of AS 7240.4:2018 optional (or optional required) functions with requirements have been validated.

| Option | |
|--|----------|
| 1. Impact (operational) (CI. 6.8) | Provided |
| 2. Vibration, sinusoidal (operational) (CI. 6.9) | Provided |
| 3. Vibration, sinusoidal (endurance) (CI. 6.12) | Provided |
| 4. Dry heat steady state (operational) (CI 6.13) | Provided |

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Schedule of properties/characteristics

The following schedule is an extract of physical and operational properties/characteristics of the certified/listed equipment.

General:

| Parameter | 24U Floor Mount Enclosure | 13U Wall / Floor Mount Enclosure |
|----------------------------|--|--------------------------------------|
| Dimensions | 1800 mm (H) × 650 mm (W) × 380 mm (D) | 900 mm (H) × 650 mm (W) × 380 mm (D) |
| External operating voltage | 230 VAC (operating range 195 to 253 VAC) | |
| Max No. of emergency zones | 512 | |
| Max No. of WIP handsets | 1024 | |
| Max No. of nodes | 64 | |
| Max No. of alarm inputs | 512 | |
| Max No. of RPCs per node | 8 (100 m CAT5/6 daisy chain) | |
| Amplifier sizes | Dual 25 Watt | |
| | 50 Watt | |
| | 150 Watt with integrated 4-way splitter | |
| Graphical user interfaces | 7 | 3 |
| Universal Rack Frame | 5 | 2 |
| Temperature | -5 °C to +50 °C | |
| Humidity | 5% to 95% non-condensing | |

Graphical user interface:

| Parameter | Detail |
|---|---|
| Display screen | 9-inch TFT LCD 800 × 480 with LED backlight and resistive touch screen |
| Microphone | 600 Ω with capsule monitoring |
| Emergency intercom headset | Electret capsule with 150 Ω speaker |
| USB support | Host (USB memory stick) and Device (mini-USB) connection |
| SD Card support | Yes |
| HLI (to 3 rd party FDCIE/Graphics) | 1 × RJ45 connector with isolated RS 485 |
| Ethernet support | 2 × RJ45 with proprietary power and transformer isolation (not for general use) |
| Current consumption | 0.185 amps (quiescent) and 0.207 amps (active) |

Amplifier card:

| Parameter | Dual 25 Watt | 50 Watt | 150 Watt |
|----------------------------|--|--|--|
| Amplifier | Class D amplifier with 2 × 25 Watt independent audio outputs | Class D amplifier with 1 × 50 Watt independent audio outputs | Class D amplifier with 150 Watt audio power and 4 audio outputs |
| Audio output 1 | N/A | N/A | 150 Watt (max) |
| Audio output 2 to 4 | N/A | N/A | 75 Watt (max) – total of 150 Watt per card |
| Distortion | <= 0.1% @ 25 Watt × 2 | <= 0.1% @ 50 Watt × 1 | <=0.3% @ 150 Watt × 1 |
| Frequency response | 400 Hz to 10 kHz ± 1 dB w.r.t 1 kHz 200 Hz to 12 kHz ± 3 dB w.r.t 1 kHz | | 300 Hz to 10 kHz ± 1 dB w.r.t 1 kHz 150 Hz to 12 kHz ± 3 dB w.r.t 1 kHz |
| SNR | >=70% | | |
| Speaker circuit monitoring | DC, nominal 47 kΩ | | |
| Max drive voltage | 100 V _{RMS} @ full load | | |
| Max output current | 2 × 0.250 Amps | 0.500 Amps | 1.500 Amps |
| Max cable size | 2.55 mm ² <small>Note 1</small> | | |
| Input | 2 × Audio streams @ 32 kHz 16-bit audio | Audio streams @ 32 kHz 16-bit audio | |
| No. of rack slots | 2 | | |
| Current consumption | 0.102 Amps (quiescent) and 2.47 amps (full audio load) | 0.097 Amps (quiescent) and 2.33 amps (full audio load) | 0.100 Amps (quiescent) and 7.500 Amps (full audio load) |

Power supply equipment:

| Parameter | 13U-RCB-1600 | 24U-RCB-1600 |
|--|---------------------------------|---------------------------------|
| Nominal mains operating voltage | 230 V 16 A 50/60 Hz | 230 V 16 A 50/60 Hz |
| Output voltage | 21.0 Vdc to 29.0 Vdc | 21.0 Vdc to 29.0 Vdc |
| Cabinet output power rating, Pa, max | 1800 W (2 PSU modules) | 2700 W (3 PSU modules) |
| Cabinet output power rating, Pb, max | 2400 W (2 PSU modules) | 3600 W (3 PSU modules) |
| Ripple and noise voltage | <1% | <1% |
| Maximum battery circuit resistance, Rmax | 30 milliohms (2 PSU modules) | 20 milliohms (3 PSU modules) |
| Minimum battery capacity | 2 × 12 V, 24 Ah | 2 × 12 V, 24 Ah |

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Supplementary information

Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

| Reference | | Title / description | Date issued (or date validated) | Source |
|-----------------------|-------------------------|---|------------------------------------|---|
| Type | Ident. | | | |
| Report | CSBA0060/R1 | Verification of conformity of the AMPAC, EvacU Elite Emergency Warning Control and Indicating Equipment to the requirements of AS 4428.4:2016 and AS 7240.4:2018 | 11-Jul-2023 | CSIRO Fire Systems Laboratory, AU. |
| | XF3544/R2 | Evaluation for Conformity of the AMPAC, EvacU Elite Emergency Warning Control and Indicating Equipment, combined with 150 Watt High Powered Amplifier to the requirements of AS 4428.16:2020 | 6-Feb-2023 | |
| | TE-P114712-1001 Issue 1 | BRE Global Test Report Technical evaluation of the Ampac 13U EvacU ^{Elite} and 24U EvacU ^{Elite} emergency warning control and indicating equipment, emergency intercom control and indicating equipment and power supply equipment to the requirements of AS 4428.16:2015, AS 4428.4:2016, AS 7240.4:2018 and selected clauses from AS 4428.16:2020 and EN 50130-4:2011+A1:2014 | 11-May-2022 | BRE Global Ltd, UK |
| | SW-P114712-1001 Issue:1 | BRE Global Test Report Software Evaluation of the AMPAC 13U & 24U EvacU Elite Emergency Warning CIE with Emergency Intercom CIE and Power Supply Equipment to the requirements of Clause 16 in AS 4428.16:2020, Clause 14 in AS 4428.4:2016 and Clauses 5.8 & 9.2 in AS 7240.4:2018 | 8-Apr-2022 | |
| Certificate | 966d Issue:01 | LPCB Certificate of Product Approval Ampac Pty Ltd Products: Control and Indicating Equipment 13U EvacU Elite Cabinet 24U EvacU Elite Cabinet Standards: AS 4428.16:2020 AS 7240.4:2018 AS 4428.4:2016 | 26-Apr:2022 | Loss Prevention Certification Board, UK |
| Manual | MAN3137-1 | AMPAC Advanced Warning Systems EvacU ^{Elite} Emergency Warning & Intercom System (EWIS) Install, Commission and User Manual (MAN3137-1 EvacU Elite Install Commission and User Manual .pdf) | 10-Mar-2022 | Ampac Pty Ltd WA, AU |
| Product data sheet | PDS 6350-0001-7 | AMPAC Advanced Warning Systems EvacU ^{Elite} (PDS6350-0001-7 EvacU Elite.pdf) | 17-Mar-2022 | |
| | PDS 6350-HPA150W | AMPAC Advanced Warning Systems 150 Watt Amplifier Card (PDS6350-HPA150W EvacU Elite 150 Watt Amplifier Card.pdf) | 2-May-2022 | |